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20 September 1957

Review by Members of the EIC Subcommittee on Minerals and Metals
of the Probable Net Advantage that would
accrue from a Long Term Exchange of Delegations
with the USSR in the Fields of Mining
and Metallurgy

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REFERENCE: IAC Ad Hoc Committee on Exchanges memorandum of
18 September 1957

1. The Subcommittee members have previously stated that short term exchanges of delegations of specialists in the (a) mining, (b) ferrous metallurgical and (c) nonferrous metallurgical industries would probably result in a net gain for the US in certain sectors of those industries and under certain conditions. Implicit in this assessment was Soviet acceptance of the proposed US itinerary in the USSR (or a satisfactory substitute), and the feasibility of limiting the Soviet opportunity for technological gains in these fields in a visit of short duration to the US.

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2. It is the opinion of the Subcommittee members that long term exchanges of delegations with the Soviets in the fields of mining and metallurgy would provide abundant opportunity for the Soviets to acquire US technology, both overt and covert, and that the net advantage from such exchanges would, on the basis of available evidence, accrue to the Soviets. The Subcommittee members recommend, therefore, (a) that the question of the desirability of a long-term exchange with the USSR in the field of mining and metallurgy be deferred until the USSR has demonstrated reciprocity on the short-term exchanges and, (b) that this question be reviewed again after an opportunity has been provided to determine from the results of the short term exchanges and/or from additional information on Soviet plants, output, etc., whether exchanges of longer duration would be advantageous to the US.

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3. Although the basic technology of the mining and metallurgical industries is fairly well standardized throughout the world, the efficiency of individual operations varies greatly with the methods employed in organizing the production process and the suitability of the equipment provided. For example, basic technology of the US taconite industry has been widely publicized, and similar operations are believed to exist in the USSR. The Erie Mining company's plant at Aurora, Minnesota, however, is believed to be unique in the efficiency of its individual units, the allocation of power, and the handling of materials, as well as in over all

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concept. A Soviet delegation, however competent technically, could not absorb and retain sufficient details in a short visit to enable them to duplicate such a plant. A visit of three to six months, however, would provide sufficient time for this purpose.

In addition, longer visits would greatly increase Soviet opportunities to acquire US technology that has not been publicly disclosed. Certain aspects of almost all types of metallurgical processing are held in the trade secret or know-how category. Among these are developments in ion-exchange, pressure leaching and reduction, solvent extraction, vacuum metallurgy, and special mechanical processing techniques.

4. The Subcommittee members wish to supplement, in the light of subsequent developments, the recommendations made in connection with the short term exchanges proposed in the fields of mining and non-ferrous metallurgy. If the US is to achieve a net [REDACTED] advantage from these exchanges the full cooperation of the affected US industries must be obtained. Primarily because of the dearth of published information on Soviet technology and operations in nonferrous mining and metallurgy, the counterpart US industries have displayed little interest in participating in an exchange of delegations with the USSR. The Subcommittee members suggest that the Soviets be asked to provide appropriate details of mining and metallurgical practices and output in installations comparable to those they wish to see in the US in order to assist US industry in considering its participation in such an exchange.

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5. As the probable Soviet technological gain from an exchange is largely dependent on the relative status of US and Soviet technology in a particular field, the observations of US specialists during a short term exchange would be of great assistance in a more precise assessment of the probable net advantage that would accrue from a visit of longer duration.

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